Please amend the claims as follows:

1. (Original) A method for automatically detecting nodules from images, the method comprising:

generating a seed point from a plurality of images that define a volume;

defining a volume of interest comprising the seed point;

choosing principal viewing axes within the volume of interest;

re-slicing the volume of interest along one of the principal viewing axes;

computing volume projection curves of the re-sliced volumes along the principal viewing axes;

analyzing the shapes of the volume projection curves; and

detecting a nodule in accordance with the analyzed shapes.

2. (Original) A method as defined in Claim 1, further comprising:

smoothing the volume of interest using a set of pre-selected scales.

3. (Original) A method as defined in Claim 1, further comprising:

estimating nodule size and position.

4. (Original) A method as defined in Claim 1 wherein analyzing comprises:

Gaussian curve fitting;

Gaussian size testing;

Gaussian size-ratio testing;

value drop-off testing; and

error-of-fit testing.

5. (Original) A method as defined in Claim 1 wherein said images comprise at least one of high-resolution, thin-slice and multi-slice computed tomography images.

6. (Original) A method as defined in Claim 1 wherein the volume comprises a lung volume.

7. (Original) A method as defined in Claim 1 wherein said nodule comprises a vessel-feeding pulmonary nodule.

8. (Original) A method as defined in Claim 1 wherein said nodule comprises a solitary pulmonary nodule.

9. (Original) A method as defined in Claim 1, further comprising:
displaying said nodule.

10. (Original) A method as defined in Claim 1 wherein said defining a volume of interest comprises:
defining a shape and a size of the volume of interest.

11. (Original) A method as defined in Claim 1 wherein said detecting comprises:
recording a detected, anatomical structure for future retrieval.

12. (Original) A method as defined in Claim 1 wherein said detecting comprises:
excluding non-nodule structures from further evaluation.

13. (Original) A method as defined in Claim 9 wherein said displaying said nodule comprises:

rendering surfaces of said nodule to provide three-dimensional visualization with the freedom of 3-D rotation.

14. (Original) A method as defined in Claim 1, further comprising:

storing the automatic detection decision.

15. (Currently Amended) A system for automatically detecting nodules from image data, the system comprising:

a seed point generation unit for examining the ~~volume~~ image data to generate a seed point;

a volume of interest generation unit in signal communication with the seed point generation unit for defining a volume of interest comprising the seed point and choosing principal viewing axes within the volume of interest;

a volume projection unit in signal communication with the volume of interest generation unit for re-slicing the volume of interest along one of the principal viewing axes, computing volume projection curves of the re-sliced volume along the principal viewing axes and projecting 1-D curves indicative of shape; and

a volume projection analysis unit in signal communication with the volume projection unit for analyzing the shapes of the volume projection curves and detecting a nodule in accordance with the analyzed shapes.

16. (Currently Amended) A system as defined in Claim 15 wherein said ~~images~~ data comprises high-resolution, thin-slice, multi-slice, computed tomography images.

17. (Currently Amended) A system as defined in Claim 15 wherein said volume of interest comprises a lung volume.

18. (Original) A system as defined in Claim 15 wherein said nodule comprises a vessel-feeding pulmonary nodule.

19. (Original) A system as defined in Claim 15, further comprising:
a CPU in signal communication with said volume projection analysis unit for examining said nodule.

20. (Original) A system as defined in Claim 17, further comprising:
a display adapter in signal communication with the CPU for displaying said nodule; and
an I/O adapter in signal communication with the CPU for recalling the shape features of the nodule.

21. (Original) A system as defined in Claim 19, further comprising:
a user interface adapter in signal communication with the CPU for receiving an external selection decision for a seed point from a user.

22. (Original) A system for automatically detecting nodules from image data, the system comprising:
means for generating a seed point from a plurality of images that define a volume;
means for defining a volume of interest comprising the seed point;
means for choosing principal viewing axes within the volume of interest;
means for re-slicing the volume of interest along one of the principal viewing axes;

means for computing volume projection curves of the re-sliced volume along the principal viewing axes;

means for analyzing the shapes of the volume projection curves; and

means for detecting a nodule in accordance with the analyzed shapes.

23. (Original) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for automatically detecting nodules from image data, the method steps comprising:

generating a seed point from a plurality of images that define a volume;

defining a volume of interest comprising the seed point;

choosing principal viewing axes within the volume of interest;

re-slicing the volume of interest along one of the principal viewing axes;

computing volume projection curves of the re-sliced volumes along the principal viewing axes;

analyzing the shapes of the volume projection curves; and

detecting a nodule in accordance with the analyzed shapes.